

Patent claims

1.-24. (canceled)

25. (new) A method for transmission of a broadcasting information routed to a central communication unit to a subscriber connection assigned to a decentralized communication unit via a communication network, comprising:

providing a first virtual connection via the central communication unit to a subscriber via the communication network, the first virtual connection adapted for transmission of an information for the subscriber connection;

providing a second virtual connection between the central unit and the decentralized communication unit; and

checking if at least a portion of the broadcasting information is to be transmitted to the subscriber connection, and if the at least portion of the broadcasting information is to be transmitted, then

transmitting the at least a portion of the broadcasting information over the second virtual connection to the decentralized communication unit,

duplicating the at least a portion of the broadcasting information transmitted in the decentralized communication unit,

forwarding the duplicated information to the subscriber connection.

26. (new) The method according to claim 25, wherein the duplicated information is inserted into the first virtual connection and is forwarded to the subscriber connection.

27. (new) The method according to claim 2, further comprising:

detecting in the central communication unit the at least a portion of the broadcasting information to be transmitted;

assigning addressing information identifying a number of the subscriber connections to the detected information;

transmitting the detected information with the assigned addressing information via the second virtual connection to the decentralized communication unit;

duplicating the at least a portion of the broadcasting information transmitted based on the assigned addressing information; and

inserting the duplicated information into the first virtual connection.

28. (new) The method according to claim 25, wherein a distribution information is stored in the central communication unit, the distribution information indicates the subscriber connection of the decentralized communication unit to which the relevant incoming broadcasting information is to be transmitted, the broadcasting information routed to the central communication unit checked via the stored distribution information as to whether at least a part is to be transmitted to the subscriber connections.

29. (new) The method according to claim 27, wherein an information set is stored in the decentralized communication unit through which the addressing information assigned to the transmitted broadcasting information is assigned to the connection is selected from the group subscriber connection, first virtual connection, and combinations thereof.

30. (new) The method according to claim 25, wherein different transmission protocols are implemented by the first virtual connection and for each transmission protocol implemented via the decentralized communication unit, the second virtual connection set up for the individual transmission protocol between the central and the decentralized communication unit.

31. (new) The method according to claim 30, further comprising:
identifying the broadcasting information routed to the central communication to be transmitted to a number of subscriber connections implementing the same transmission protocol of the decentralized communication unit;
transmitting the identified information from the central communication unit via the second virtual connection to the decentralized communication unit;
duplicating the transmitted information in the decentralized communication unit; and
forwarding the duplicated information to the number of subscriber connections implementing the same transmission protocol.

32. (new) The method according with claim 30, wherein the transmission protocol implemented by the subscriber connections is additionally indicated by the distribution information stored in the central communication unit.

33. (new) The method according to claim 28, wherein a subscriber-individual selection of the at least a part of the broadcasting information is made in the central communication unit via the distribution information being updated as a function of the relevant subscriber-individual selection.

34. (new) The method according to claim 33, wherein the subscriber-individual selection is made as part of the IGMP protocol terminated in the central communication unit and that within the framework of the IGMP protocol, the selection information is transmitted via the decentralized communication unit, the selection information is read and evaluated in the decentralized communication unit and via of the evaluation result the information set stored in the decentralized communication unit is updated.

35. (new) The method according to claim 25, wherein the communication network is embodied as a frame-oriented or a packet-oriented communication network in accordance with IEEE Standard 802.3 and that the first virtual connections are embodied in accordance with IEEE Standards 802.1Q and 802.1D.

36. (new) The method according to claim 25, wherein the broadcasting information routed to the central communication unit is embodied in accordance with the Internet Protocol or the TCP/IP protocol.

37. (new) The method according to claim 36, wherein the at least part of the broadcasting information routed to the central communication unit is inserted into a Ethernet data frame having a routing and payload information, with the addressing information assigned in each case representing a component of the routing information of the Ethernet data frame.

38. (new) The method according to claim 37, wherein the assigned addressing information represents an Ethernet multicast MAC address.

39. (new) The method according to claim 25, wherein the broadcasting information routed to the central communication unit is transmitted via a higher-level communication network connected to the central communication unit.

40. (new) A communication system for transmission of broadcasting information routed to a central communication unit to a subscriber connection assigned to a decentralized communication unit via a communication network, comprising:

a first virtual connection from the central communication unit via the communication network, via the decentralized communication unit to a subscriber connection unit, the first virtual connection for transmission of information for the subscriber connection;

a second virtual connection between the central and the a decentralized communication unit;

a first controller in the central communication adapted to check if at least part of the broadcasting information is to be transmitted to a number of the subscriber connections, the at least part of the broadcast information transmitted via the second virtual connection to the decentralized communication unit; and

a second controller in the decentralized communication unit through which the transmitted information is duplicated and forwarded to the number of the subscriber connections.

41. (new) The communication system according to claim 40, wherein the second controller is adapted so that duplicated information is inserted into the first virtual connection specific to the subscriber and is forwarded to the subscriber connection.

42. (new) The communication system according to claim 41, wherein the first controller is adapted for assigning addressing information identifying the number of subscriber connections of the at least part of the broadcasting information to be transmitted, the information to be transmitted being transmitted with the assigned address information via the second virtual connection, the second controller adapted for duplicating the at least part of the broadcasting assigned addressing information based on the assigned addressing information and adapted for inserting into the first virtual connection the duplicated information.

43. (new) The communication system according to claim 40, wherein the subscriber connections of the decentralized communication unit are embodied such that different transmission protocols are implemented by the first virtual connection, and for each transmission protocol implemented via the decentralized communication unit the second virtual connection is specific to a transmission protocol.

44. (new) The communication system in accordance with claim 43, wherein:
the first controller is adapted to check whether at least a part of the
broadcasting information is to be transmitted to the number of subscriber connections of the
decentralized communication unit which each implement the same transmission protocol, and
wherein the first controller is adapted to transmit the part of the broadcasting
information for a number of subscriber connections implementing the same transmission
protocol via the a second virtual connection specific to the transmission protocol to the
decentralized communication unit, and
wherein the second controller is adapted to duplicated and forward the
transmission of the at least one part of the broadcasting information to the subscriber
connection implementing the same transmission protocol.

45. (new) A communication device which can be arranged in a communication
network,
a first virtual connection from a central communication unit via a
communication network, via the decentralized communication unit to a subscriber connection
unit, the first virtual connection for transmission of broadcasting information for a subscriber
connection, the broadcasting information routed to the central communication unit to a
subscriber connection assigned to a decentralized communication unit via the communication
network;
a second virtual connection between the central and the a decentralized
communication unit;
a first controller in the central communication adapted to check if at least part
of the broadcasting information is to be transmitted to a number of the subscriber connections,
the at least part of the broadcast information transmitted via the second virtual connection to
the decentralized communication unit; and
a second controller in the decentralized communication unit through which the
transmitted information is duplicated and forwarded to the number of the subscriber
connections.